

REMARKS

Claims 1-9 are pending in this application. Claims 1 and 7 have been amended. No new matter has been introduced. The amendment to claim 7 obviates the 35 U.S.C. §112, second paragraph, rejection of this claim.

Claims 1-9 are rejected under 35 U.S.C. §103 as being unpatentable over Tierney et al. (U.S. Patent No. 5,384,335) ("Tierney") in view of Sie et al. (U.S. Patent No. 5,216,034) ("Sie") or König et al. (U.S. Patent No. 5,631,302) ("König"), and further in view of Dunn et al. (U.S. Patent No. 2,524,899) ("Dunn"). This rejection is respectfully traversed.

The subject matter of claims 1-9 would not have been obvious over Tierney, Sie, König and Dunn, considered alone or in combination. The cited references do not teach or suggest all limitations of amended independent claim 1. The process of Tierney is based on a reaction scheme completely different from that of the claimed invention, and from those of Sie and Dunn. Specifically, the process of Tierney is based on a first reaction wherein methanol is carbonylized with carbon monoxide to methyl formate, and the thus-produced methyl formate is hydrogenised in a second reaction to methanol in the presence of a homogenous catalyst comprising basic compounds (col. 3, lines 35-44; col. 5, lines 23-32; claim 1). The major by-product in the process of Tierney is a small amount of highly volatile and easy separable methyl formate (col. 6, lines 54-59). As emphasized in Tierney, an advantage of the process of Tierney is avoiding a two-step process carried out in two reactors and two feed preparation systems (col. 4, lines 6-14).

Sie and König refer to two-stage processes, wherein methanol synthesis gas is partially converted into methanol in a first reactor, and wherein the effluent from the first reactor is cooled for condensing and separating methanol (formed prior to unconverted synthesis gas in the effluent) and passed to a second conversion step (see König at col. 3, lines 50-61; see Sie at col. 2, lines 22-28).

In contrast, the claimed invention relates to hydrogenation of aldehydes and ketones in the methanol raw product after intermediate cooling by contact with a hydrogenation catalyst. This

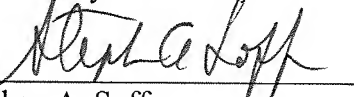
hydrogenation of aldehydes and ketones in the methanol raw product after intermediate cooling by contact with a hydrogenation catalyst (as claim 1 recites) is not possible in the processes of Tierney, Sie and Konig, simply because the effluent in Sie and Konig (that is passed to a subsequent reactor) does not contain methanol, and because the process of Tierney follows a different route with a combined production i.e., a single step formation of methyl formate (an ester of formic acid) and methanol.

Dunn relates to the purification of alkyl esters of lower fatty acids, wherein crude byproduct oil containing the esters is first distilled (with methanol, for example) in an amount sufficient to remove substantially all hydrocarbons as low boiling azeotropes (col. 2, lines 9-18). After removal of hydrocarbons azeotropes, the liquid residue from the methanol distillation containing the esters is hydrogenised, to remove aldehydes and ketones from the ester fraction (col. 3, lines 25-43). Thus, Dunn discloses hydrogenation of aldehydes and ketones in a completely different environment (i.e., ester compounds) from that of the claimed invention. In addition, the process of the claimed invention differs also from the teachings of Tierney, Sie and Konig in that hydrogenation of aldehydes and ketones present in the effluent from a methanol reactor are hydrogenised by means of unconverted methanol synthesis gas (claim 1; page 7, lines 25-29 of the application). For at least the reasons above, the Office Action fails to establish a *prima facie* case of obviousness, and withdrawal of the rejection of claims 1-9 is respectfully requested.

Allowance of all pending claims is solicited.

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